

## ABSTRACT

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A method is disclosed for creating a refined geometric description (GD) of an object from an image of the object and a rough GD model of the object. The rough GD model of the object is provided, for example, by manually drawing a graphical depiction of the object on top of its image, using a GUI, for example, and/or by using CAD data. Next, the rough GD model is refined such that it more closely fits an instance of the object in the image. In preferred embodiments, a user can specify a geometric constraints for the refined model, such as requiring that each of the vertices of the final refined curvilinear GD model have right angles. The resulting GD model can be used with any application requiring a GD model of an object, including not only automatic recognition and inspection applications, but also CAD/CAM applications.

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